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CENTRAL REGIONAL ENVIRONMENTAL OFFICE

US ARMY ENVIRONMENTAL CENTER

Pollution Prevention and Control in Action: *Camp Dodge Paint Facility*

By MAJ Ashley Wendt*PAO, Iowa Army National Guard*

Environmental Compliance Officer, SSG Jeff Edgington and the Iowa Army National Guard's Environmental Branch, in partnership with the Iowa Waste Reduction Center at University of Northern Iowa, have designed and implemented pollution prevention and control measures that are yielding great benefits. Traditionally, paint facilities have been significant contributors to various waste streams including hazardous wastes. This



Paint Facility Team. *Photo courtesy of the Iowa Army National Guard.*

team has put together a series of technologies and practices specifically aimed at the paint facility that have improved operations by reducing wastes thereby reducing disposal costs.

A very important advancement in waste minimization and control is the addition of the Closed Loop Advanced Waterjet System or CLAWS. Brought on line in the summer of 2003, CLAWS is a paint-stripping system that uses a high-pressured water jet to remove paint without generating caustic hazardous wastes produced by the previous system. The CLAWS unit employs a closed

loop feature that continuously runs water through cycles. Wastewater from the paint stripping operation is sent through an extensive recycling process, then returns clean water for the next use. After repeated testing, every other byproduct of the CLAWS process has been determined as non-hazardous resulting in a significant reduction in hazardous waste costs. Current cost is limited to replacing and disposing of the two filters in the water recycling system.

This change in systems has reduced operating costs to \$2,400 a year from \$90,000 per year, a cost reduction of over 98%. Moreover, personnel at the facility have enjoyed the ease and simplicity of the CLAWS system thereby allowing them to concentrate more on painting than with waste removal.

Recently, the paint facility has also begun working with a new high volume, low-pressure paint (HVLP) gun. This new HVLP gun decreases project time by 47 percent and uses 24 percent less paint material, resulting in a much more efficient and cost effective painting operation. The biggest savings from the HVLP



CLAWS high pressure paint stripping unit. *Photo courtesy of the Iowa Army National Guard.*



High pressure paint stripping operation. *Photo courtesy of the Iowa Army National Guard.*

comes in the filter change-out process. In the past, all 64 filters had to be changed every two to three days at a cost of \$300 per set. But now, filter changes have been reduced to every two weeks resulting in a cost savings of about \$45,000 per year.

The Paint Prepping System (PPS) is
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Chief Commentary

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As colleagues serving together on the Southwest Strategy's Regional Executive Committee, Dale Hall, currently Regional Director for the U.S. Fish & Wildlife Service Southwest Region 2, and I have had many opportunities to exchange information and ideas based on our experiences as executive level servants of federal land holding agencies.

Dale has often said that DoD's environmental stewardship has been and continues to be praiseworthy. With that thought in mind, we decided to ask Dale a few questions that might shed some light on his views in that regard. These questions were developed in concert with DoD natural resource managers as well as regional input.

What follows are some observations and insights from Dale in response to questions that I recently posed to him regarding aspects of DoD's stewardship and natural resource management efforts.

Q. DoD has just issued a policy memorandum on 5 year reviews of Installation Natural Resource Management Plans (INRMPs), stating that if all parties agree, rewrites are only necessary when major changes have occurred in conditions or training. What is your position on this policy? Could inclusion of occasional, routine training events in the INRMP alleviate the need for Biological Opinions in most cases?

A. The U.S. Fish and Wildlife Service (FWS) co-hosted a Sikes Act Conference in April 2004 at our National Conservation Training Center, with DoD, the Army, other military services and the International Association of Fish and Wildlife Agencies (IAFWA). Our collaborative discussion on new Sikes Act – INRMP policy being developed by DoD and by the Service focused on the very topic of 5 year reviews of INRMPs. We agreed at that conference and in regional step-down meetings that the key to INRMP review and revision needs to be the focus of the team at the installation and in the field offices of the Service and the State. The decision to review an INRMP and to revise it remains with an Army installation. The focus of an Army, FWS, and State INRMP team should be to assist the Army in implementing an INRMP in addition to reviewing that INRMP and in revising the plan as needed. In the Southwest Region, we have examples of INRMP teams that have evolved in partnerships between the military installation, FWS, the State and other parties. In fact, the Southwest Region sponsored an INRMP team from Barry M. Goldwater Range, AZ, at the April, 2004 Sikes Act Conference, that was widely received by the audience for their positive presentation on their tripartite part-

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Regional Events Calendar

- 10/18** Southwest Strategy Tribal Relations Support Team, Phoenix, AZ
- 10/21-22** Oklahoma Military Environmental Group Meeting, Oklahoma City, OK
- 10/27-28** TCEQ Pollution Prevention Workshop, Austin, TX
- 11/9** Texas Environmental Partnership Meeting, Dallas, TX
- 1/26-27** Southwest Strategy Regional Executive Forum Meeting, Phoenix, AZ
- 1/31-2/2** AEC 2006 Environmental Workshop, San Antonio, TX
- 2/16-17** Iowa 6th Annual Water Monitoring Conference, Iowa City, IA
- 4/4-6** Army Installations Symposium and Exhibition, Kansas City, MO

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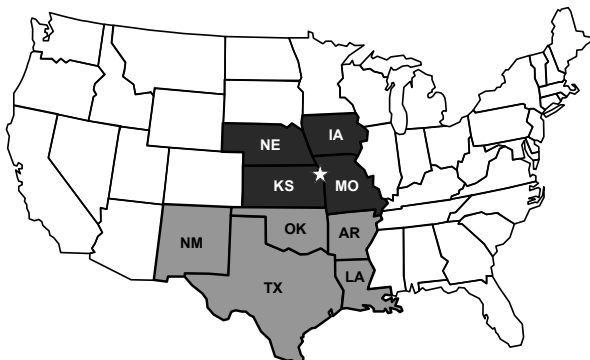
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CREO Nine-State Area of Responsibility

DoD REC Region 7	
Army REC Region 6	
Army REC Region 7	

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nership between the military, FWS and the State, in addition to other partners from the local communities, Tribes, other State and Federal agencies, and the public. These collaborative partnerships strengthen and support the military mission and military conservation efforts at military ranges and installations.

Inclusion of occasional training events in the INRMP are Army decisions and are outside the scope of the FWS. The need for Section 7 consultation whether informal or formal is also an Army decision. At the recent Army National Guard 2005 Conservation Conference, the FWS, Southwest Region, was invited to bring a team in to teach breakout sessions on the Endangered Species Act, Section 7 Consultation, and Critical Habitat, in addition to participating on panels for Sikes Act/INRMPs and for Army Compatible Use Buffers (ACUBs). We noted that the Army and the FWS have used early FWS and State involvement as well as informal consultations, to refine species conservation and preclude the need for formal consultation in some cases. The FWS understands the value of the Army using a team approach, including early involvement and communication with the FWS, to help the INRMP promote range sustainability and to protect the military mission.

Q. Recent Congressional legislation has emphasized the importance of ensuring coordination and concur-

rence of INRMPs is achieved with the FWS. What assurance is the FWS going to be looking for to ensure the INRMPs are being implemented?

A. The FWS is committed to supporting the Army and other military services in their INRMP development, implementation, monitoring, reviewing and revising actions. We understand that the Army and other military services may decide to implement endangered species conservation actions in INRMPs that are required through Section 7 formal consultations and Biological Opinions. There are examples of military installations enacting cooperative agreements with the FWS to include FWS staff support in implementing INRMP conservation projects. We understand that monitoring military installation INRMPs is a military decision and that the Navy is working to develop an INRMP conservation metric that can be used by all the military services to monitor the success of their INRMPs including implementing proposed INRMP projects.

Q. Region 2 has a lot of Army compatible use buffer (ACUB) efforts going on there (Ft. Sill, Ft. Huachuca, Ft. Hood). Do you see a role for the FWS in your region in supporting the Army's current efforts to conserve natural resources around our bases?

A. The FWS, Southwest Region created a DoD Liaison 2 years ago to get involved early in the DoD compatible use buffer lands initiative and the Army Compatible use buffer (ACUB) program, and also to strengthen our ties and communication with the Army and other military services across a



The Topeka shiner, found on Fort Riley. Photo courtesy of Garold W. Sneegrass and Fort Riley.

four State region that includes many of the key military training ranges and installations in the nation. Our DoD Liaison serves in a facilitator and advisor role to Army installations such as Fort Sill, OK in assisting the Army in developing its buffer land project and subsequent ACUB proposal and in developing the Fort Sill compatible use buffer lands partnership with the Oklahoma ES Field Office, the FWS Wichita Mountains National Wildlife Refuge, local communities, local land trust organizations, other Federal and State agencies, counties, Tribes and the State Legislature.

These military installation buffer lands partnerships have great potential for conserving natural resources around military bases, on both private and State lands. The FWS is an active conservation partner with private landowners, NGOs, State and Tribal landowners and other Federal land managing agencies in working with them toward common goals in conservation of endangered species, and fish and wildlife resources across ecosystem and landscape level. We look forward to continuing to work closely with our military partners in the Southwest Region.

Q. How does Region 2 enforce Migratory Bird Treaty Act (MBTA) issues for non-readiness activities?

A. The FWS works with Federal and State agencies in conservation of migratory birds primarily through its Migratory Bird Program. The FWS supports Federal land management



The Black capped vireo, an endangered species Forts Sill and Hood. Photo Courtesy of Pat Velte, Backyard Birdcam.

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agencies in migratory bird conservation projects, partnerships, and permits. As you may know, the FWS published a draft rule in 2004 to allow the Department of Defense (DoD) incidental take of migratory birds during military readiness training as directed by the 2003 National Defense Authorization Act. As for non-readiness activities, we understand that DoD and the FWS are continuing to develop policy for these types of activities. This was a topic of discussion at the recent March 2005 National Military Fish and Wildlife Association Conference. The FWS has joined with the DoD and the military services and others to carry out voluntary migratory bird conservation

policy that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.

Recovery planning and implementing recovery actions for many species involves working in partnership with multiple landowners across the landscape. Voluntary conservation actions by private landowners and State land agencies are supported by a variety of conservation tools (e.g. private landowner incentive programs, endangered species conservation grants, safe harbor agreements, conservation agreements, habitat conservation plans) funded partially by the FWS, States, conservation foundations and other NGOs. The Southwest Region is very active in private, State and Tribal lands conservation partnerships including those around some military installations. These conservation partnerships with private, State and Tribal landowners are beneficial to a military installation that may share endangered species conservation and recovery actions with a host of other partners.



Foreground. An endangered desert tortoise. Photo courtesy, US Army.

initiatives under the DoD Partners in Flight program and through Joint Ventures established under the North American Waterfowl Management Plan. We have a migratory bird team in the Regional Office and at certain field locations who are available to work with military installations on migratory bird activities.

Q. *The FWS is a regulator for the Endangered Species Act (ESA) for federal agencies. However, in order to achieve recovery of most species the FWS will need to incorporate state and private lands. What is the region doing in this regard?*

A. The Endangered Species Act (ESA) requires all Federal agencies to conserve threatened and endangered species. Congress stated in its

Q. *So much is made of compliance with the ESA and the MBTA. However, what is the region doing to promote the more traditional areas of the Service, such as hunting, fishing and outdoor recreation?*

A. The FWS National Wildlife Refuge program includes over 500 refuges across the nation. The FWS Southwest Region is very active in promoting hunting, fishing and outdoor recreation at our national wildlife refuges where the public may participate in a vast array of outdoor activities. In addition, our Fisheries Program promotes outdoor recreation and fishing opportunities and helps support public fishing opportunities. Fisheries works with the States and Federal agencies, including military installations, to provide recreational fish from our national fish hatcheries. Our Ecological Services Program, through our many Ecological Ser-



The Bald Eagle, a species found on many installations. Photo courtesy, US Army.

vices Field Stations, provides input to Federal water resource agencies on recreational fishing opportunities and the need for mitigating loss of fisheries resources and aquatic habitat in proposed water resource development projects. We are working with the States to assist in the development of their State Comprehensive Wildlife Conservation Plans which are due out in draft form for public review in late 2005. These plans will be funded by Congress and will guide and shape traditional fish and wildlife resource use and outdoor recreation opportunities in all our States.

Dale Hall is the Regional Director for the U.S. F&WS SW Region 2 headquartered in Albuquerque, NM. Mr.



Hall is responsible for directing the Service's fish, wildlife, and habitat conservation, protection, and enhancement activities in Arizona, New Mexico, Texas, and Oklahoma. He has been recently nominated to be Di-

rector of the US Fish and Wildlife Service. Please see page 7 for more information. ☛

Ancient Native American Archeological Site Unearthed at The Doña Ana Range/Fort Bliss

By Virginia Reza

Staff Reporter, Fort Bliss Monitor

In a recent find, archeologists have discovered pueblo and pit-house sites at the Doña Ana Range that are believed to date back to between the 14th and 15th centuries. This time frame coincides with the occupation of the Doña Ana by the Jornada Mogollon, a branch of the "Mogollon" culture in reference to the prehistoric peoples who inhabited much of southern New Mexico, east-central Arizona, northern Chihuahua, and far western Texas. The term "Jornada" comes from the term Jornada del Muerto or "Journey

Mogollon also appear to have participated in a widespread trade network, with other Mogollon peoples to the west, e. g. Texas High Plains bands, Middle Rio Grande pueblos, and northern Chihuahuan communities in Mexico.

Mr. Myles Miller, archeologist and principal investigator for the project has stated

that, "This is the first pueblo excavation that has been done professionally in over 20 years. I believe the last one was in 1986...So this kind of excavation is probably going to have a real revolutionary effect on understanding how people lived about 500 years ago out here. It's a big find for this area."

"You are looking at multiple occupations here



Principal archeologist holds a piece of an unearthed, broken pottery bowl typical of this ancient culture. Photo courtesy of Fort Bliss Monitor.

of Death" in reference to a desolate stretch of roadway used by the Spanish in their travels from El Paso to Santa Fe.

The Jornada Mogollon development consisted of a pattern of increased agriculture, pithouse village life, pueblo construction, and ultimately, cultural collapse. During the time that they lived in this region, the Jornada Mogollon apparently relied more on hunting and gathering and less on agriculture. Even though they constructed pithouses near their fields, evidence indicates that the Jornada Mogollon may have occupied them during part of the year, at planting or harvesting time.

Being more nomadic, the Jornada

over a period of time. You're talking about a separate occupation here and hundreds of years later you have another pueblo built 50 meters away from each other," said Brian D. Knight, senior archeologist.

Knight said the site was found last year, but due to lack of funding they excavated until the budgeted amount was expended. The site



The John A. Hedrick Site: the dark areas inside the pueblo walls are burned beams believed to have been ritually set on fire. Photo Courtesy of Fort Bliss Monitor.

was then covered with plastic and preserved until recently when more funding was available.

After performing a survey of the land, a high density of surface artifacts was found scattered throughout the area, which indicated previous intensive occupation. Then they sampled by excavating and scraping back some of the sand.

"And sure enough the pueblo walls started turning up," said Knight. "The site is pretty spectacular, it's huge. "We had never anticipated it was going to be as nice as it is," said Knight.

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Another view of the John A. Hedrick Site. Photo courtesy of Fort Bliss Monitor.

Coming Soon: A Fire Management Support System for Land and Mission Sustainability

By Tim A. Christiansen and Deborah Nethers,

The Nature Conservancy/ITAM, White Sands Missile Range, NM

Restoring, rehabilitating, and maintaining sustainable natural environments are important elements in sup-

port of military missions. The semi-arid southwest landscape presents particular challenges in addressing wildland, prescribed and natural fires while maintaining ecosystems in terms of military sustainability and readiness because of the variability in vegetation. This can, in part, be addressed by exchanges of information and experiences that can accelerate planning, implementation. This may save valuable financial resources by learning from past experiences by not repeating good intentions that have not been successful.



Fire training event in the field. Cooperative effort is the most effective means to address fire management issues. *Photo courtesy of White Sands Missile Range.*

port of military missions. The semi-arid southwest landscape presents particular challenges in addressing wildland, prescribed and natural fires while maintaining ecosystems in terms of military sustainability and readiness because of the variability in vegetation. This can, in part, be addressed by exchanges of information and experiences that can accelerate planning, implementation. This may save valuable financial resources by learning from past experiences by not repeating good intentions that have not been successful.

White Sands Missile Range (WSMR) in partnership with The Nature Conservancy through the Integrated Training and Testing Area Management (ITAM) Program has worked and continues to work to find methods for fuel management that will be available to enhance sustainability of training and testing areas. As a result of these efforts, a

Department of Defense fire management support system is being developed and will be available for anyone who manages, plans, or implements fire management and fuel reduction on DoD lands. The purpose of this system, called the Wildland and Prescribed Fire Management Support System (WPFMSS) is to increase the free-flow of ideas, strategies, tactics and other information accelerating the rehabilitation of fire-adapted ecosystems thereby sustaining military readiness.

The specific aim of the WPFMSS is to accelerate the rehabilitation of ecosystem function at various landscape scales by fostering innovative methods and transfer of lessons learned with regional efforts. Lessons shared would include adaptive fire management and capabilities in application of the best available fire science tools. The WPFMSS will be similar to the national Fire Learning Network (FLN) developed by The Nature Conservancy, in collaboration with the Department of Interior, the United States Forest Service, the Bureau of Land Management and other federal and state agencies. The FLN is ac-

celerating rehabilitation and restoration of 69 million acres of public lands of fire-influenced ecosystems such as grasslands, shrublands, forests and riparian land types.

A forum is being created to provide the ability for participants to exchange information on fire issues, experiences, planning and agreements. DENIX (Defense Environment Network and Information Exchange – an information clearinghouse for DoD environment, safety and occupational health news, information, policy and guidance) has been identified as an electronic host for disseminating information on wildland fire management and fuel reduction.

The DENIX fire site prototype has been developed and is being refined for how topics (includes fire topics listed above) are to be addressed and filed within the DENIX system. The site will be composed of documents and links to fire topics and is expected to be available by late 2005 or early 2006. Other electronic networking tools that can be used include the Army Environmental Center's monthly regulatory reviews and the quarterly Environmental Update which can publish articles that provide news items that assist DoD installations in conforming to environmentally sound stewardship with the use of fire.

Networking capability such as the

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Establishing a fire break. Fire is a natural function of many ecological systems, and plays an important role in maintaining lands for military use. *Photo courtesy of White Sands Missile Range.*

(Continued from page 6)

DENIX site would allow land managers to gain or share knowledge on various sustainability issues, such as sharing data, experiences, fire research results, management and implementation plans, scientific models for defining desired conditions, models and methods for assessing landscapes or habitats, informational

tools such as fire fighting equipment needs, planning templates, fire risk analysis, conceptual guidance (GIS and modeling assistance), cost/benefit ideas and methods.

Agreement building with neighboring agencies by the use of Memorandums of Understanding and Mutual Aid

agreements on meeting common fire management goals will allow DoD installation natural resource managers to find means to reduce fuel loads

and wildfire risks in training/testing areas and sustain/rehabilitate ecosystems more efficiently. High fuel loads can be hazardous to personnel and inhibit the use of pyrotechnics which simulate realistic training conditions.

Many DoD installations have been using various treatment methods for addressing fire and fuel man-



Example of the amount of materials generated from mechanical thinning. Photo courtesy of White Sands Missile Range.



Materials generated from mechanical thinning can be recycled and used for multiple purposes including erosion control. Photo courtesy of White Sands Missile Range.

agement issues – from the use of human caused fire in place of natural fire to mechanical thinning. DoD long-term fire study sites may lead to understanding recovery and impacts of fire and fuel management on land conditions.

If you would like to learn more about this network, please call either (505) 678-0701 or (505) 678-2298. ☎

President Nominates H. Dale Hall to be Director of the US Fish and Wildlife Service

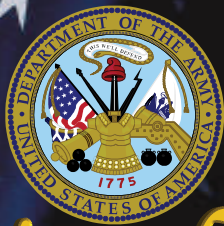
Secretary of the Interior Gale A. Norton praised President Bush's intention to nominate H. Dale Hall to serve as Director of the U.S. Fish and Wildlife Service.

"Dale brings to the job a wealth of experience and a record of being part of the answer to complex problems," said Ms. Norton. "As a qualified scientist, he has worked on everything from the Northwest Forest Plan to the California Bay/Delta water settlement, to the plan for restoring the Everglades. He has dealt with wetlands across the nation and water issues on the Middle Rio Grande and the Missouri Rivers. In every instance he has sought consensus and solutions. I am confident he will continue that record."

A 27-year career employee, Mr. Hall has served in Albuquerque, N.M. as the Southwest Regional Director of the Service since 2001. He began his career with the Service in 1978 performing field work in wetlands ecology in Vicksburg, MS. Mr. Hall continued in the ecological services area in Galveston and Houston where he worked as Outer Continental Shelf Coordinator with responsibility to work with Minerals Management Service to protect sensitive areas in the Western Gulf of Mexico. He was also the office supervisor in Texas for four years.

Mr. Hall worked as Deputy Assistant Director for Fisheries in Washington, D.C. where he was instrumental in bringing consensus to the Multi-Species Conservation Plan for the Lower Colorado River. That plan is a 50-year fish and wildlife conservation initiative that provides more than \$620 million in federal and local funding along 400 miles of the lower Colorado River. Mr. Hall's experience also includes a term as Deputy Regional Director in Atlanta, Ga. and one as Assistant Regional Director for Ecological Services in Portland, Ore.

Mr. Hall said he was humbled and honored to be nominated by the President and to have the confidence of Secretary Norton. "I'm looking forward to this position and to using my experience to lead our outstanding employees in finding science-based, cooperative solutions to the tough issues before the Fish and Wildlife Service." The appointment is subject to confirmation by the U.S. Senate, once the official nomination is made by the President." ☎



U.S. Army's Regional Environmental Offices Serving the Soldier for 10 Years

Since 1995, the U.S. Army's Regional Environmental Offices (REOs) have played a key role in coordinating, communicating, and facilitating regional environmental issues and activities with policy-makers, regulators, and the public. Under the direction of the U.S. Army Environmental Center (USAEC), the four strategically located REOs serve as the bridge between the Department of Defense (DoD) and regional, state, local, and tribal agencies, installations, and commands by:



- Helping to ensure that DoD environmental policies are consistently interpreted and applied at all Army installations.

- Serving as the focal point for environmental information and coordination of environmental issues related to Army activities in their geographic areas.
- Working with federal regions and state and local governments on environmental issues of importance to the Army and neighboring communities.

The Army Regional Environmental Coordinators (RECs) are the REO's front-line points-of-contact. They are responsible for understanding the state regulatory and legislative climate, as well as for interacting with Department of Army Headquarters, the Installation Management Agency (IMA), installations, and their counterparts in the other military services. Together with others on the REO staffs, the RECs:

- Communicate via newsletters, partnerships, and conferences or forums.
- Facilitate partnerships and collaboration.
- Coordinate public outreach initiatives to assist installations in obtaining recognition for stewardship initiatives, programs, and activities.

All work performed at the REOs — and all their accomplishments over the past decade — ultimately reflect the U.S. Army's commitment to striking an appropriate balance between military readiness and environmental stewardship. In the years to come, the REOs will continue to play their part in fulfilling the obligation set forth in the 2004 *Army Strategy for the Environment*:

To ensure that our Soldiers today – and the Soldiers of the future – have the land, water, and air resources they need to train; a healthy environment in which to live; and the support of local communities and the American people.

Forging and strengthening community partnerships improves the Army's ability to meet mission requirements and is therefore a key focus of the Army REOs. Partnerships and other collaborative activities foster information exchange, mutual understanding, and progress toward common goals in a cooperative, non-adversarial atmosphere.

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Steve Scanlon, Region 7 Senior REC, exchanging information with a service member at a conference.

As a focal point for information exchange between stakeholders, the REOs provide state legislators and regulators an inside look at many of the stewardship initiatives, land management programs, and installation activities that the Army has undertaken to sustain the lands within its jurisdiction. In doing so, they are able to help state policymakers:

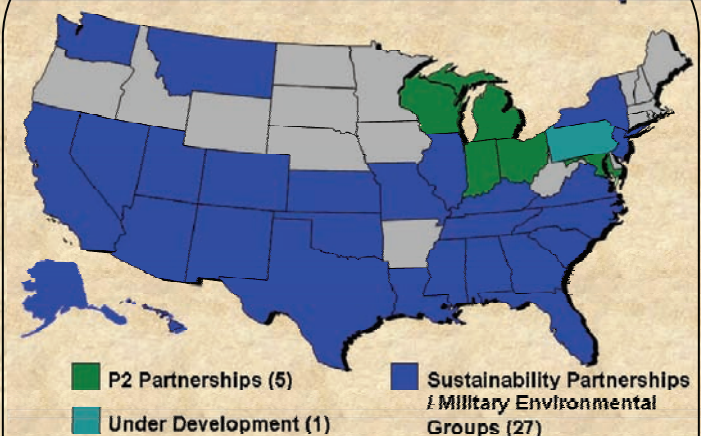
- ☐ Appreciate both the economic and national security importance of the installations.
- ☐ Understand and identify incompatible land-use trends and environmental requirements.
- ☐ Work toward managing potential threats to military readiness and range sustainability.

CREO Initiatives and Partnerships

- ☆ **Environmental Legislative/Regulatory Analysis & Monitoring Program - State**
- ☆ **Kansas Military Environmental Group**
- ☆ **Missouri Military Environmental Group**
- ☆ **Defense Environmental Advocacy - Louisiana**
- ☆ **New Mexico Partnership**
- ☆ **Oklahoma Military Environmental Group**
- ☆ **Southwest Strategy**
- ☆ **Texas Environmental Partnership**

The REOs have been instrumental in developing and maintaining partnerships between states, the U.S. Environmental Protection Agency (EPA), IMA, other DoD services, and military installations. Thirty-four states now have formal Pollution Prevention or Environmental/Sustainability Partnerships with DOD or are members of state/DoD Military Environmental Groups (MEGs). These partnerships have enhanced the REO's accessibility to senior personnel in EPA regional and state environmental offices, and they have enabled the REOs to promote awareness of the Army sustainable range program, the problems of encroachment for military installations, and other issues of concern.

DoD-State-EPA Partnerships



The REOs played a major role in planning or sustaining more than 33 partnerships with federal, tribal, state, local, and regional regulators and legislatures.

REOs serve the installations and commands by making them aware of the regulations or state legislation that could affect the mission, readiness, or sustainability of resources. They also help minimize potential adverse effects by sharing cost-saving ideas and lessons learned and by facilitating the partnership programs among the installation and the states.



Kansas Representative Tom Sloan (right) with the CREO Regional Counsel (left) on tour of Fort Carson.

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The 11 room pueblo has one central large room, which is believed to be a communal room, typical of the Jornada Mogollon. Knight said they can usually distinguish it as a ritual room because it doesn't have the normal domestic activity type things, such as a ground stone artifact used for food processing. These rooms usually have more ritual type objects and less utilitarian type artifacts.

So far, the team has found hearths,



A *metate* or stone grinding slab artifact believed to have been left by the Jornada Mogollon. Photo courtesy of Fort Bliss Monitor.

ground stone and significant amounts of prehistoric ceramics. They have also found evidence of various burned beams, which according to some theories the pueblos were set on fire by the tribes before they abandoned them. It might have been a ritualistic or catastrophic event. "We have even found in one of the rooms what appears to be cache," said Knight.

Knight said a large percentage of the



Global positioning system is used to obtain coordinates of the outside of the pueblo's walls for final map construction. Photo courtesy of Fort Bliss Monitor.

Jornada Mogollon culture is contained on Fort Bliss and White Sands Missile Range. "We are one of the primary core areas for the Jornada Mogollon culture. We have a giant archeological research laboratory between the two installations," said Knight.

According to Knight, the fall of the Jornada Mogollon was probably around 1450 A.D. The

primary theory of their fall is that there may have been an extensive drought during that time period, which may have caused the groups to start moving across the landscape.

Another hypothesis is other groups such as the Manso, Suma, Jocome, possibly the Tarahumara

and some of the other Apache groups that

were moving through the area and were conducting raids. Researchers believe that this may have disrupted the Jornada Mogollon culture as a whole.

The site is not open to the public due to safety issues such as live artillery and convoy exercises. According to Knight they

will seek to provide opportunities for public visits in the future.

Knight said they will produce reports, which will have complete maps, photographs and detailed descriptions of everything that was found. The artifacts will be collected and kept in the Fort Bliss Curatorial Facility. Researchers are encouraged to visit the facility



Screening for small artifacts at the discovered site in Doña Ana. Photo courtesy of Fort Bliss Monitor.

and analyze the data to use in their own research. They will be able to examine the artifacts and get copies of the reports.

"The main thing I want people to understand is that we have a lot of rich archeological resources out here. We are probably providing some of the best research that is being done in the west Texas and southern New Mexico area. Sometimes there is a perception that because we are on a military base



Archeologist carefully brushes and exposes an unearthened hearth where the Jornada Mogollon prepared their food. Photo courtesy of Fort Bliss Monitor.

the evidence is being damaged and written off, and that is absolutely not the case. It is important for the public to know that the military is doing a very fine job in protecting our cultural patrimony," said Knight.

The unearthened site has been named after John A. Hedrick, a curator who handled the collections at Fort Bliss for many years. He also excavated a number of sites on the Fort Bliss area and all through west Texas and the Trans Pecos. "So it's a tribute to him," said Knight. ☛



Matters of Interest to All DoD Components



Legally Brief

By Stanley Rasmussen
CREO Regional Counsel

New Sovereign Immunity Waiver for Federal USTs

On August 8, 2005, when President Bush signed the Energy Policy Act of 2005 into law, he was also authorizing a new sovereign immunity waiver applicable to federally owned or operated underground storage tanks (USTs) regulated under the Resource Conservation and Recovery Act (RCRA). As discussed in a previous *Legally Brief* article, Congress must specifically authorize states to enforce environmental laws and regulations against federal agencies and entities. This so-called "waiver of sovereign immunity" was granted by Congress for nearly every major environmental law, but until recently had not been fully granted to the UST program under RCRA.

In 1992, in response to the Supreme Court ruling in the case of DOE v. Ohio, Congress enacted the Federal Facilities Compliance Act (FFCA) of 1992. In the DOE v. Ohio case, the Supreme Court had ruled that waivers of sovereign immunity must be clear and unequivocal. Because the sovereign immunity language of the Clean Water Act (CWA)

and RCRA did not clearly and unequivocally waive immunity from liability for civil fines imposed by states for violations of these laws, the Supreme Court ruled that states could only impose coercive fines on federal entities (i.e., fines to induce compliance with an injunction or other judicial order) and that states could not impose punitive fines on federal entities (i.e., fines imposed to punish past violations of an environmental law). Accordingly, in the FFCA Congress quickly revised the RCRA sovereign immunity waiver as it applies to solid and hazardous waste to allow for the imposition of punitive fines by states against a federal entity, but did not revise the separate sovereign immunity provisions under RCRA that apply specifically to state regulation of USTs.

Now, 13 years later, Congress has finally expanded the waiver of sovereign immunity for UST regulation under RCRA. Under this new language states now have the authority to impose "administrative orders and all civil and administrative penalties

and fines, regardless of whether such penalties or fines are punitive or coercive in nature or are imposed for isolated, intermittent, or continuing violations." The new language also states that the "United States hereby expressly waives any immunity otherwise applicable to the United States with respect to any such substantive or procedural requirement (including, but not limited to, any injunctive relief, administrative order or civil or administrative penalty or fine referred to in the preceding sentence, or reasonable service charge)."

The Energy Policy Act contained additional requirements concerning UST regulation under RCRA, some of which is applicable to federal USTs. For example, now there is a requirement for all federal agencies to submit a UST compliance report to Congress by August of 2006, mandatory state inspection programs, and possible secondary containment requirements for new USTs installed near drinking water wells. Contact this office if you would like additional information about these additional requirements. ☛

EPA Extends Katrina-Related Fuel Waivers for Some States

In the aftermath of Hurricane Katrina, on September 13, 2005, EPA provided flexibility to fuel production and distribution in the Gulf Coast and nationwide by issuing waivers for diesel fuel sulfur requirements and summer gasoline volatility controls. EPA exercised its authority under the Clean Air Act to issue a second, temporary waiver of highway diesel fuel sulfur requirements through October 5, 2005 for states that continue to be affected by disruptions to the fuel production and distribution system caused by Hurricane Katrina.

This action will allow diesel fuel normally used in off-road equipment to be used in highway vehicles in those impacted states. The states affected by the second waiver of highway diesel requirements include Arkansas, Louisiana, New Mexico, and Texas.

On August 31, EPA waived the federal requirement for summer grade gasoline nationwide. Under normal circumstances that requirement ends in all parts of the country on September 15, except for Phoenix, AZ, Texas, and California. These three states requested that EPA waive federal enforceability of these requirements. For more details, please go to

<http://yosemite.epa.gov/opa/admpress.nsf/4d84d5d9a719de8c85257018005467c2/ed5a062e1b421d578525707c00639e04!OpenDocument>. ☛

Building Environmental Sustainability into Fort Leonard Wood Military Family Housing

By Keith Duncan

Environmental Division, Fort Leonard Wood

In 2003, the Fort Leonard Wood (FLW) Environmental Division took the initiative to form partnerships with Environmental Protection Agency (EPA) Region 7, Missouri Department of Natural Resources, and American Eagle Corporation, to develop a strategy for implementing Sustainability



The oak flooring and other salvageable woodwork is pulled up and re-sold. *Photos courtesy of FLW.*

into installation housing. Partnering proved the key to idea development and establishing vital contacts. This

partnership and frequent "partners" meetings inculcated environmental sustainability thinking into the three areas of the project: new residence design, demolition of old structures, and construction from a long-range perspective.

Once the concept was established, the Army awarded American Eagle a 50-year contract at FLW that includes replacing residences and incorporating Environmental Sustainability as part of the Residential Communities Initiative (RCI). In this initiative, the private sector finances, develops, plans, builds, and maintains large on-post housing developments for military installations.

Throughout the process, FLW emphasized environmental sustainability through the Sustainable Project Rating Tool (SPiRiT), a self-assessing system designed to help the Army create facilities that meet the needs of current missions and accommodate future missions in a sustainable cost-effective, environmentally friendly manner. The idea is to give Soldiers the same quality of life on post that he or she would

find off post.

The project began with the first demolition phase that included the 200 residences on Turner Street. The first step to sustainability is salvaging everything possible out of the structure. A three-year contract with a local



Cabinets, faucets and sinks are salvaged for re-sale. *Photos courtesy of FLW.*

recycling company was signed with no money exchanging hands with the proviso that the salvager must take everything.

Items salvaged for resale included central air conditioning units, stoves, refrigerators, dish washers, water


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Web Based Tool for Sustainable Installations Regional Resource Assessment

Sustainable Installations Regional Resource Assessment or SIRRA Version 1 is a web-based analysis tool developed by CERL that provides a first level screening intended to assist users in answering four questions related to installation sustainability using spatially related national data sets.

- What are important sustainability issues for an installation outside of its fence line?
- How can unit transformation and stationing requirements be best met on existing or new DoD installations?
- How does sustainability compare across a range of installations, for example, in the context of realignment of forces?
- What is the regional context of an installation for one or a group of sustainability indicators?

SIRRA is a process of characterizing the region surrounding a military installation based on an evaluation of air, energy, urban development, threatened and endangered species, location, water, economy, quality of life, infrastructure, and security. Military installations are placed geographically in a location and GIS data are applied to evaluate regional aspects of the installation setting.

Collectively, indicators can aid in identifying potential issues that should be considered when stationing and mission sustainment decisions are made. This information can also inform installation sustainability planning. Some limitations of this study do necessitate caution in the use and application of the results. The set of indicators are based on the expert judgments and consensus of the project team and were somewhat restricted by the available data. The identification of specific thresholds and classifications is subjective in some cases, and alternative classifications are possible. The goal of the database is to provide useful insight into identifying relative ratings for resource issues across installations and these results should not be interpreted as absolute. Installations have different regional resource issues and differing missions. Therefore, application of the data should be done with this in mind. For more information on SIRRA Version 1, please go to <https://ff.cecer.army.mil/ff/sirra.do>. 

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heaters, and furnaces. Also removed for resale were cabinets – kitchen and bath, windows, doors, light fixtures, oak floors, sinks, commodes, and electrical boxes.

Storage space proved to a limiting factor in resale of salvage. For example, 4,000 sq ft was required just to accommodate appliances from the Turner Street demolition. To overcome this limitation, the salvage company bought three side-by-side warehouses close to FLW. These salvage warehouses are open for business every day to sell the items. Appliances in good condition are resold at \$100 each. Oak flooring is popular, selling for \$1.50 per sq foot with nails removed. Approximately 20,000 sq ft of white oak flooring was salvaged from the Turner St residences alone.

With regard to new housing, each design feature has sustainability as its central theme. Neighborhoods are designed to be conducive to walking and bicycling with interconnected paths and parks. Cul-de-sacs and on-street parking are eliminated to ease congestion. Residences are sited for advantageous views of forested ar-

eas. The project design also includes vegetation screening, natural buffer areas, open space trails and greenways. Regionally adapted low-maintenance native plants that require little or no irrigation, fertilization, or mowing will be planted. Ecological design principles include working with the lay of the land, and managing storm water as close to where precipitation hits the ground rather than piping.

This entire project is designed to “buy green” which is purchasing recycled materials whenever it is cost effective. Green purchase examples include:

- glass fiber insulation that contains 25% recycled glass;
- paint that contains 5% recycled paint from product returns; and
- rubber surfacing that contains 72% or more recycled rubber products.

Water saving devices such as low-flow shower-heads and toilets will be included. Composite wood products are used where appropriate to reduce the amount of large timbers required during construction. There will be energy savings from better

windows and advanced wall insulation techniques. Examples of maximizing insulation effectiveness include:

- advanced wall insulation techniques including framing eliminating un-insulated wall sections;
- filling cavities entirely leaving no gaps;
- tightly sealed ducts;
- high efficiency vinyl windows; and
- properly sealing wall penetrations and providing gaskets at electrical outlets.

And finally, the residences will meet the Energy Star standards denoting use of high-efficiency appliances.

Incorporating Environmental Sustainability into the massive housing project at Fort Leonard Wood is off to a good start. Partnering was the key to project success. MDNR and EPA, the installation staff, and contractors quickly learned to cooperate in achieving their often-divergent aims. All soon realized that environmentally friendly initiatives work best when profitable or at least cost neutral. Partnering provided the forum to discuss ideas and brainstorm the costs and benefits. ☺

(Continued from page 1)

yet another innovative tool being used to decrease paint waste. About a year ago, the paint facility converted from their traditional metal paint cup to a disposable version. The new disposable plastic bladders decrease waste to about two ounces instead of a quart. Disposable liners are also being used in the pressure pots eliminating the need for one gallon of lacquer thinner to clean the pots. Again, a reduction in the generation of hazardous waste.



Spray painting operation. Photo courtesy of the Iowa Army National Guard.

Other simple but important means of reducing waste streams include:

- Using a closed agitator system that allows eight gallon-sized paint cans to be hooked up at one time to extend shelf life of paints used on military vehicles from two to three days to seven to eight days. The sealed lid also keeps the can clean and minimizes the time of exposure.
- Using viscosity cup testers to know more precisely how much paint thinner needs to be added to simplify the mixing process and reducing or eliminating improper mixing and wasted paint.

Equipment and procedural changes are not the only things that have been improved at the facility. Paint facility personnel now attend the annual two-day Star Defense environmental training course conducted by the Iowa Waste Reduction Center, University of Northern Iowa. This training allows them to remain current on federal regulations that affect their practices. In



Water filtration recycle unit. Photo courtesy of the Iowa Army National Guard.

addition, personnel receive hands-on experience with many different brands of equipment and paints.

In a costly operation, pollution prevention is an invaluable tool to minimize the waste stream and costs. As new technologies emerge, the Paint Facility will seize these opportunities to make the unit more efficient and environmentally sound. ☺

Secretary of the Army Environmental Awards Program, 2005

The Call for Nominations is open for the FY05 Secretary of the Army Environmental Awards Program. The following is a description for the 2005 award nominations categories to recognize efforts and innovations in:

- Natural Resources Conservation (NRC) Award - Small Installation/Civil Works Facility and Individual or Team for promoting the conservation of natural resources, including the identification, protection, and restoration of biological resources and habitats; the sound management and use of the land and its resources; and the promotion of the conservation ethic.
- Cultural Resources Management (CRM) Award - Installation/Civil Works Facility for promoting the management of cultural resources, including the identification of historical buildings and structures, archaeological sites, Native American and Native Hawaiian sacred objects and sites, curation, and the promotion of the cultural resources conservation ethic. Historic building reuse is also a factor in this award.
- Environmental Quality (EQ) Award - Non-Industrial Installation and Individual or Team for protecting human health and the environment by achieving full and sustained compliance with all applicable environmental requirements. Includes environmental management systems and pollution prevention efforts that achieve compliance in the areas of environmental planning, waste management, safe drinking water, as well as implementation of environmental management systems.
- Pollution Prevention (P2) Award - Industrial Installation/Civil Works Facility in preventing pollution at the source, including practices that reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials, energy, water, or other resources.
- Environmental Restoration (ER) Award - Installation/Civil Works Facility and Individual or Team in protecting human health and the environment by cleaning up identified DoD sites, in a timely, cost-efficient, and responsive manner.
- Environmental Excellence in Weapon System Acquisition (EEWAS) – Team in incorporating environmental, safety, and occupational health (ESOH) requirements into the weapon system acquisition program's decision making process.

Nominations are due back to USAEC by 14 October 2005. For details, please go to <http://aec.army.mil/usaec/publicaffairs/awards00.html#army>.

USAEC Command and Staff Quiz

- 1) What will be the name of the Army's new primary combat power organization?
 - a. Combat Battalion Teams
 - b. Combat Brigade Teams
 - c. Regimental Combat Teams
 - d. Task Forces
- 2) About how many positions is the Army realigning under the reorganization?
 - a. 500,000
 - b. 75,000
 - c. 100,000
 - d. 50,000
- 3) Which Army post will feel the biggest impact from the reorganization?
 - a. Fort Sam Houston, TX
 - b. Fort Drum, NY
 - c. Fort Bliss, TX
 - d. Fort Lewis, WA
- 4) What will be the percentage of combat power increase under the reorganization?
 - a. 20%
 - b. 30%
 - c. 40%
 - d. 50%
- 5) Fill in the blanks: What is the goal of the reorganization? To transform the Army into a more _____ and _____ organization.
 - a. adaptable, versatile
 - b. light, powerful
 - c. deployable, lean
 - d. home-based, projection oriented

Answers on last page.

CREO

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ENVIRONMENTAL NEWSLETTER

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Mission: The CREO supports the Army and DoD mission through coordination, communication and facilitation of regional environmental activities. The Army REOs are part of a DoD network in which the Army, Air Force and Navy each has lead responsibility for mission implementation in the 10 Standard Federal regions. The CREO has DoD lead responsibility for Region 7 and Army lead responsibility for Regions 6 & 7.

WWW Edition: <http://aec.army.mil/usaec/reo/index.html>



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